# DM-RMC-100-C

## DigitalMedia 8G+™ Receiver & Room Controller 100

- *DigitalMedia 8G+™ receiver and display controller*
- *Connects to a DM® switcher or transmitter over a single CAT type twisted pair cable[1]*
- *Supports cable lengths up to 330 ft (100 m) using DM 8G® cable or CAT5e[1]*
- *HDBaseT® Certified — Enables direct connection to other HDBaseT certified equipment*
- *Provides one HDMI® or DVI display output[2]*
- *Handles video resolutions up to Full HD 1080p*
- *Handles computer resolutions up to WUXGA*
- *Handles 3D video and Deep Color*
- *Handles Dolby® TrueHD, DTS-HD®, and uncompressed 7.1 linear PCM audio*
- *HDCP compliant*
- *Provides a 10/100 Ethernet LAN connection*
- *Enables device control via CEC, IR, RS-232, and Ethernet*
- *Compatible with USB-EXT-DM USB over Ethernet Extenders[4]*
- *Allows quick, easy setup and diagnostics*
- *Low-profile surface mount design*
- *Powered via the DM connection or local power pack (included)[3]*

The DM-RMC-100-C provides a simple one-box interface solution for a single display device as part of a complete Crestron® DigitalMedia™ system. It functions as a DM 8G+™ receiver and control interface, providing a single HDMI® output along with Ethernet, RS-232, and IR control ports. In addition to DM 8G+, it is also compatible with HDBaseT®, allowing it to be connected directly to an HDBaseT certified source. Its compact, low-profile design allows the DM-RMC-100-C to be installed discreetly behind a flat panel display or above a ceiling mounted projector. It connects to the head end or source location using a single CAT type twisted pair cable.[1]

### DigitalMedia 8G+™

As the leader in HDMI and control system technologies, Crestron developed DigitalMedia (DM®) to deliver the first complete HD AV distribution system to take HDMI to a higher level. DigitalMedia allows virtually any mix of HDMI and other AV sources to be distributed throughout a home, office, school, or virtually any other facility. The latest generation of DM is called DigitalMedia 8G™ (DM 8G®). Engineered for ultra high-bandwidth and ultimate scalability, DM 8G provides a true one-wire lossless transport for moving high-definition video, audio, Ethernet, and control signals over a choice of low-cost twisted pair or fiber optic cable.

DM 8G over twisted pair copper wire is called DigitalMedia 8G+ (DM 8G+). DM 8G+ handles uncompressed Full HD 1080p video signals with support for 3D, Deep Color, and HDCP, as well as computer signals up to WUXGA. Audio capabilities include support for high-bitrate 7.1 audio formats like Dolby® TrueHD and DTS-HD Master Audio™ as well as uncompressed linear PCM. All signals are transported over a single CAT type cable, supporting distances up to 330 feet (100 m) using Crestron DM 8G Cable or CAT5e.[1]

### HDBaseT® Certified

Crestron DigitalMedia 8G+ technology is designed using HDBaseT Alliance specifications, ensuring interoperability with other HDBaseT certified products. Via its DM 8G+ input, the DM-RMC-100-C can be connected directly to an HDBaseT compliant source without requiring a DM transmitter. HDBaseT connectivity through the DM-RMC-100-C converges uncompressed full HD digital video, audio, Ethernet, power, and control signals through a single CAT5e or CAT6 cable.[1]

### Multimedia Display Interface

A single HDMI digital AV output port is provided on the DM-RMC-100-C for connection to a display or other device. The HDMI output can also handle DVI signals using an appropriate adapter or interface cable[2].

A single cable connects the DM-RMC-100-C to a DM switcher or transmitter, or to an HDBaseT source, transporting video, audio, control, networking, and power signals all through one simple RJ45 connection.[1,3] Multiple DM-RMC-100-Cs may be installed to handle each display in a multiroom distribution system, all fed from a central DM-MD series switcher. Or, a single DM-RMC-100-C can be fed straight from a DM 8G+ or HDBaseT transmitter, affording a simple solution for extending a computer or AV signal to a single display.

### LAN Connectivity

Along with high-definition AV and control, DigitalMedia also integrates high-speed Ethernet networking for a total signal distribution solution. The DM-RMC-100-C includes a 10/100 Ethernet port, providing a convenient LAN connection for a local network device.

### Embedded Device Control

The primary objective of every Crestron system is to enable precisely the control desired for a seamless user experience. The DM-RMC-100-C includes built-in RS-232, IR, and Ethernet control ports to allow programmable control of the display device connected to it. But, it can also provide an alternative to such conventional control methods by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its connection to the control system, the DM-RMC-100-C

# DM-RMC-100-C DigitalMedia 8G+™ Receiver & Room Controller

**DM-RMC-100-C – Left, Front, and Right Views**

provides a gateway for controlling the display device right through the HDMI connection, potentially eliminating the need for any dedicated control wires or IR emitters.

### USB Signal Extension (optional)

DigitalMedia allows for the routing of USB signals alongside video and audio. USB signal extension is enabled on the DM-RMC-100-C by adding a USB-EXT-DM USB over Ethernet Extender Module[4].

### Low-Profile Installation

The DM-RMC-100-C mounts conveniently to a wall, ceiling, or other flat surface. At just one inch deep, it fits easily behind a flat panel display or above a ceiling-mounted projector. The unit can be powered using the wall mount power pack (included), or via PoDM (Power over DigitalMedia) for a true one-wire solution[3]. All connections and LED indicators are positioned on the sides, ensuring optimal access and visibility for a clean, serviceable installation. An array of indicators is provided for easy setup and troubleshooting.

*Please refer to the DigitalMedia Resources Webpage at* http://www.crestron.com/dmresources/ *for additional design tools and reference documents.*

## SPECIFICATIONS

### Video

**Input Signal Types:** DM 8G+™ (DigitalMedia™ over one CAT type twisted pair copper wire), HDBaseT® [1]

**Output Signal Types:** HDMI®, DVI[2]

**Formats:** DM 8G+, HDBaseT, & HDMI w/Deep Color & 3D; DVI; HDCP content protection support

**Input Resolutions, Progressive:** 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 852x480@60Hz, 854x480@60Hz, 1024x768@60Hz, 1024x852@60Hz, 1024x1024@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1365x1024@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@25Hz (1080p25), 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz, 2048x1080@24Hz, 2048x1152@60Hz, plus any other resolution allowed by HDMI up to 165MHz pixel clock

**Input Resolutions, Interlaced:** 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30), plus any other resolution allowed by HDMI up to 165MHz pixel clock

**Output Resolutions:** Matched to input

### Audio

**Input Signal Types:** DM 8G+, HDBaseT

**Output Signal Type:** HDMI

**Formats:** Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio™, up to 8ch PCM

### Communications

**Ethernet:** 10/100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP

**RS-232:** 2-way device control and monitoring up to 115.2k baud with hardware and software handshaking

**IR/Serial:** 1-way device control via infrared up to 1.1 MHz or serial TTL/RS-232 (0-5 Volts) up to 19.2k baud

**DigitalMedia:** DM 8G+, HDCP, EDID, CEC, PoDM, Ethernet

**HDBaseT:** HDCP, EDID, PoH, Ethernet

**HDMI:** HDCP, EDID, CEC

NOTE: Supports management of HDCP and EDID; supports pass-through and management of CEC between HDMI source and sink, or between HDMI sink and a control system

# DM-RMC-100-C DigitalMedia 8G+™ Receiver & Room Controller

## Connectors

**HDMI OUT:** (1) 19-pin Type A HDMI female;
HDMI digital video/audio output; Also supports DVI[2]

**COM:** (1) 5-pin 3.5mm detachable terminal block;
Bidirectional RS-232 port;
Up to 115.2k baud, hardware and software handshaking support

**IR 1 – 2:** (1) 4-pin 3.5mm detachable terminal block comprising (2) IR/Serial ports;
IR output up to 1.1 MHz;
1-way serial TTL/RS-232 (0-5 Volts) up to 19200 baud

**LAN:** (1) 8-wire RJ45 female, shielded;
10Base-T/100Base-TX Ethernet port

**Ground:** (1) 6-32 screw, chassis ground lug

**DM IN:** (1) 8-pin RJ45 female, shielded;
DM 8G+ input, HDBaseT compliant;
PoDM and PoH PD (Powered Device) port[3];
Connects to the DM 8G+ output of a DM switcher, transmitter, or other DM device, or to a HDBaseT device, via CAT5e or Crestron DM-CBL-8G cable[1]

**24VDC 0.75A MAX:** (1) 2.1 x 5.5 mm DC power connector;
24 Volt DC power input; PW-2407WU power pack included

## Controls & Indicators

**HDMI OUT:** (1) green LED, indicates video signal presence at the HDMI output
**LAN:** (2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity
**DM IN:** (2) LEDs, green LED indicates DM link status, amber LED indicates video and HDCP signal presence
**RESET:** (1) miniature recessed pushbutton, for hardware reset
**SETUP:** (1) red LED and (1) miniature recessed pushbutton, for Ethernet setup
**24VDC:** (1) green LED, indicates operating power supplied via PoDM, PoH, or local power pack

## Power Requirements

**Power Pack:** 0.75 Amps @ 24 Volts DC;
100-240 Volts AC, 50/60 Hz power pack, model PW-2407WU included
**Power over DM (PoDM):** PoDM PD (Powered Device), capable of being powered by a PoDM PSE (Power Sourcing Equipment), conforms to IEEE 802.3af (802.3at Type 1) Class 3 (12.95W) [5]
**Power over HDBaseT (PoH):** PoH PD (Powered Device), capable of being powered by a PoH PSE (Power Sourcing Equipment), conforms to IEEE 802.3af (802.3at Type 1) Class 3 (12.95W) [5]

Note: May be powered via power pack or PoDM/PoH, not both.

## Environmental

**Temperature:** 32° to 104°F (0° to 40°C)
**Humidity:** 10% to 90% RH (non-condensing)
**Heat Dissipation:** 29 BTU/Hr

## Enclosure

**Chassis:** Metal, black finish, with (2) integral mounting flanges, vented top and bottom
**Mounting:** Freestanding, surface mount, or attach to a single rack rail

## Dimensions

**Height:** 6.09 in (155 mm)
**Width:** 5.63 in (143 mm)
**Depth:** 1.02 in (26 mm)

## Weight

16.5 oz (468 g)

# MODELS & ACCESSORIES

### Available Models

**DM-RMC-100-C:** DigitalMedia 8G+™ Receiver & Room Controller 100

### Included Accessories

**PW-2407WU:** Wall Mount Power Pack 24VDC, 0.75A, Universal (Qty. 1 included)

### Available Accessories

**DM-CBL-8G-NP:** DigitalMedia 8G™ Cable, non-plenum
**DM-CBL-8G-P:** DigitalMedia 8G™ Cable, plenum
**DM-8G-CONN:** DigitalMedia 8G™ Cable Connector
**DM-8G-CRIMP:** Crimping Tool for DM-8G-CONN
**DM-8G-CONN-WG:** DigitalMedia 8G™ Cable Connector with Wire Guide
**DM-8G-CRIMP-WG:** Crimping Tool for DM-8G-CONN-WG
**CBL Series:** Crestron® Certified Interface Cables
**MP-WP Series:** Media Presentation Wall Plates
**MPI-WP Series:** Media Presentation Wall Plates - International Version
**CNSP-XX:** Custom Serial Interface Cable
**IRP2:** IR Emitter Probe w/Terminal Block Connector
**USB-EXT-DM:** USB over Ethernet Extender with Routing

Notes:

1. For DM 8G+ or HDBaseT wiring, use Crestron DM-CBL-8G DigitalMedia 8G Cable, Crestron DM-CBL DigitalMedia Cable, Crestron DM-CBL-D DigitalMedia D Cable, or third-party CAT5e (or better) UTP or STP. Maximum wire length for DM 8G+ is 330 ft (100 m) between devices. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance at resolutions above 1080p. Refer to the Crestron DigitalMedia Design Guide, Doc. #4546 for complete system design guidelines. DM 8G+ is compatible with HDBaseT Alliance specifications for connecting to HDBaseT compliant equipment. All wire and cables are sold separately.
2. The HDMI output requires an appropriate adapter or interface cable to accommodate a DVI signal. CBL-HD-DVI interface cables are available separately.
3. Receiving Power over DM (PoDM) or Power over HDBaseT (PoH) requires connection to a switcher or other equipment that has a PoDM or PoH PSE (Power Sourcing Equipment) port. Any wiring that is connected to a PoDM or PoH PSE port is for intra-building use only and should not be connected to a line that runs outside of the building in which the PSE is located.
4. Item(s) sold separately.
5. References to the IEEE 802.3af and 802.3at standards are used to demonstrate that PoDM and PoH technology is similar in function to PoE and follows the same essential specifications.

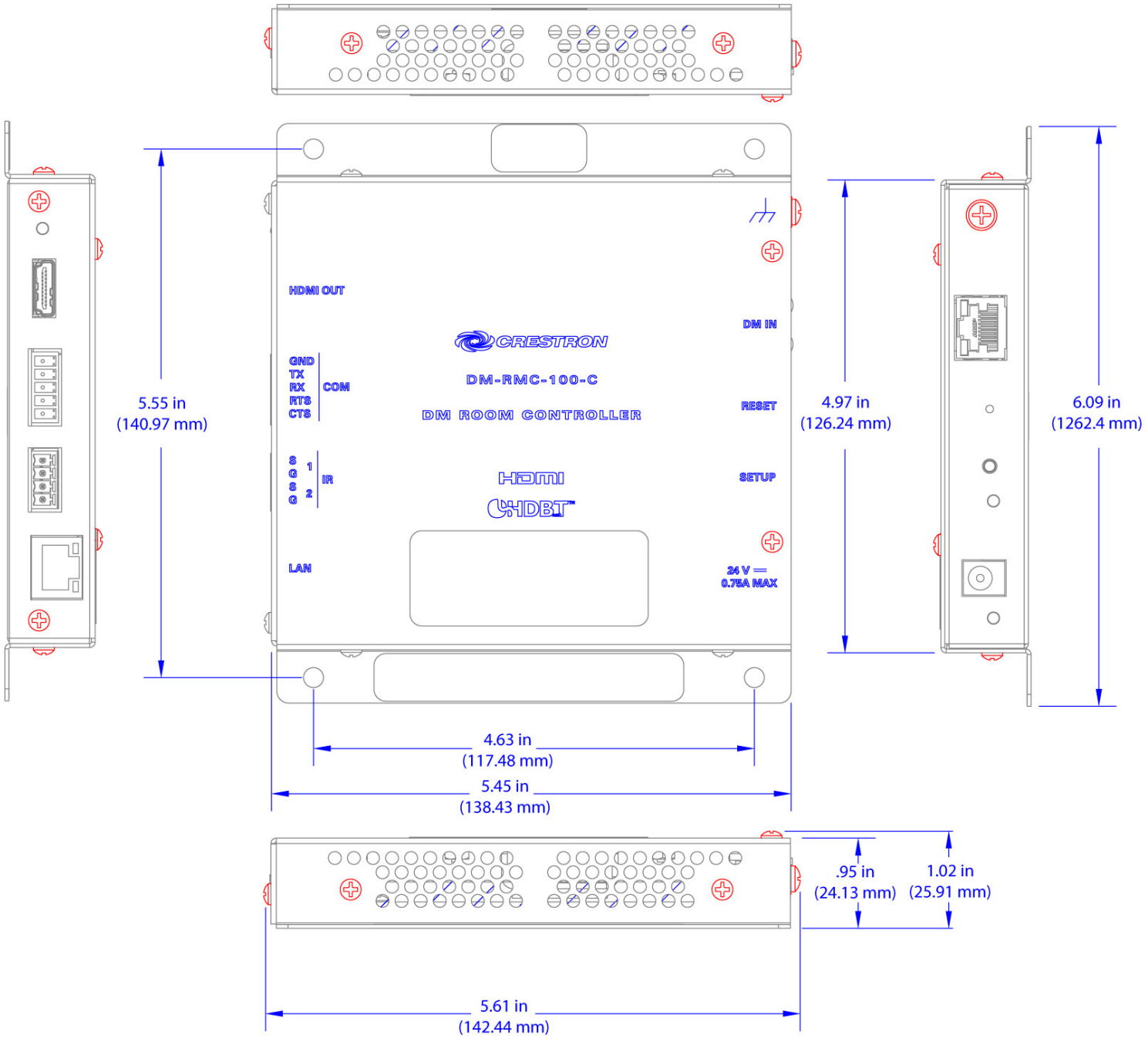
# DM-RMC-100-C DigitalMedia 8G+™ Receiver & Room Controller

The DM-RMC-100-C cannot be powered over Ethernet, and its DM IN port should not be connected directly to an Ethernet network or device.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

Crestron, the Crestron logo, DigitalMedia, DigitalMedia 8G, DigitalMedia 8G+, DM, DM 8G, and DM 8G+ are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. Dolby and Dolby Digital are either trademarks or registered trademarks of Dolby Laboratories in the United States and/or other countries. DTS, DTS-HD, and DTS-HD Master Audio are either trademarks or registered trademarks of DTS, Inc. in the United States and/or other countries. HDBaseT and the HDBaseT Alliance logo are either trademarks or registered trademarks of the HDBaseT Alliance in the United States and/or other countries. HDMI and the HDMI Logo are either trademarks or registered trademarks of HDMI Licensing LLC in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. Crestron is not responsible for errors in typography or photography. Specifications are subject to change without notice. ©2014 Crestron Electronics, Inc.




Crestron Electronics, Inc. 15 Volvo Drive | Rockleigh, NJ 07647
Tel: 800.237.2041 / 201.767.3400 | Fax: 201.767.1903
www.crestron.com

All brand names, product names and trademarks are the property of their respective owners.
©2014 Crestron Electronics, Inc.

*Specifications subject to change without notice. Revised 09/26/14*